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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/539,305

09/16/2005

Martin Engler

2679

7590

12/14/2007

Breneman & Georges  
3150 Commonwealth Avenue  
Alexandria, VA 22305

EXAMINER

HANNON, THOMAS R

ART UNIT

PAPER NUMBER

3682

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12/14/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/539,305	<b>Applicant(s)</b> ENGLER ET AL.	
	<b>Examiner</b> Thomas R. Hannon	<b>Art Unit</b> 3682	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/16/05</u> . | 6) <input type="checkbox"/> Other: _____  |

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the subject matter of claims 29-35 must be shown or the feature(s) canceled from the claim(s). The drawings must show all possible combinations presented by the listing of parts of claim 29. **No new matter should be entered.**

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 29-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 29 sets forth combinations not described in the original specification. Claim 29 defines a first substrate material and a second substrate material. The second substrate material is defined as being "disposed at an operable distance from" the first substrate, with a coating in the second substrate "to lubricate said first uncoated substrate material". The claim further defines the first substrate as forming "a bearing, a ball, a roller or a bearing cage", and the second substrate as "forming a bearing, a ball, a roller or a bearing cage". The original disclosure does not support all the combinations presented by listing the first and second substrates as each of the above listed components being disposed at an operable distance from one another. For example, there is no support for the combination of the first substrate being a cage and the second substrate also being a cage disposed at an operable distance from the first cage with a coating on one cage and lubricating the other cage. Additionally, there is no support in the original disclosure for claiming a roller as the first or second substrate material.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the phrase "in particular" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 2, the limitation of "one of the parts is a high pressure ball bearing" is inconsistent with claim 1, as it is not one of the parts that is a ball bearing but the combination of parts. That is, claim 1 recites "parts that move relative to each other". It is these parts that comprise the bearing. To refer to "one of the parts" as a ball bearing does not agree with the scope of claim 1. Additionally with respect to claim 2 the term "mill." as used in line 3 is not understood. Moreover, the parenthetical subject matter should be properly incorporated into the claim.

Claim 3 is indefinite in lines 4-5, and is inconsistent with claim 1. As claim 1 defines the parts moving relative to each other, the phrase "as the parts move" is indefinite, as it implies the parts move together and not relative to each other.

In claim 4, line 5, "a counter-surface" should be changed to --the counter-surface--, as this has already been properly set forth in line 3.

Regarding claim 5, the limitation of "a component to be coated" is not understood. What is the relationship between such a component and "the parts including a coating" of claim 1. Such a limitation appears to be an improper double inclusion of the same element of the claim.

Regarding claim 6, there is no proper antecedent for "the component" in line 5, and similar to claim 5 this appears to be an improper double inclusion of the same element of the claim.

Claim 15 is incomplete.

Regarding claim 17, there is no proper antecedent for "the substrate material".

Claim 19 is not understood. It is not understood how the coating can cause its own surface hardness to decrease.

Claim 20 is not understood. What additional structural limitation is being added by this claim?

The scope of claim 21 is improper. Claim 1 defines an antifriction bearing. The claim limitation of "at least one component of a sliding bearing is provided with a coating" does not further limit the structure of such an antifriction bearing.

Claim 22 lacks a proper antecedent for "the contacting surfaces".

Claim 25 is indefinite and confusing. It is not understood what is meant to be claimed by "the lubricant is designed as a carrier for the lubricant(s)".

The scope of claim 27 cannot be determined, as it refers to unidentified "prior art lubricant". Reference to unidentified prior art in the claims must be avoided. If a particular lubricant of the prior art is meant to be incorporated into the claim, such a specific lubricant should be specifically referenced in the claim (with proper antecedent support for such specificity found in the original disclosure).

Claim 28 is not understood, as it refers to the lubricant as consisting of several layers, where the specification describes the coating as several layers. It is unclear how the lubricant in the coating consists of several layers.

Claim 29 is indefinite and unclear as it is not understood how the antifriction device can have all the combinations presented in the claim.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 8, 9, 12, 14, 15, 17, 18, 22-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Metrikin US 2002/0142264.

Metrikin discloses an antifriction bearing comprising at least a part of the surface of one of the parts (a retainer) includes a coating of lubricant (silver). With respect to claims 2-4, 8, 14, 15, 17, and 18, these limitations are inherent in the device of Metrikin. With respect to claims 9, and 22-25, Metrikin discloses an oil in the coating (paragraph [0016]). With respect to claim 26, note paragraph [0019].

Claims 1-8, 10-20 22-29 31-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Kinno et al. EP 1,262,674.

Kinno discloses an antifriction bearing having parts with a diamond-like carbon layer coating. The antifriction bearing also has parts with a fluorine contained resin coating film (25) including PTFE [0144]. The bearing has a DN greater than one million [0232]. The fluorine contained coating inherently coves the coating to uncoated parts. The DLC layer further exhibits a varying composition [0179], increasing to a free surface. The coating includes intermediate layers of tungsten and chromium [0265-0268].

Claims 29 and 30 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Yamazumi et al. US 5,271,679.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas R. Hannon whose telephone number is (571) 272-7104. The examiner can normally be reached on Monday-Thursday (8:30-7:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Thomas R. Hannon  
Primary Examiner  
Art Unit 3682

trh